

CATALOGUE OF THE GENERA OF THE HEMIPTEROUS
FAMILY APHIDÆ, WITH THEIR TYPICAL SPECIES,
TOGETHER WITH A LIST OF THE SPECIES
DESCRIBED AS NEW FROM 1885
TO 1905.

BY G. W. KIRKALDY, HONOLULU.

It is now twenty years since the lamented Jules Lichtenstein published the first—and, unfortunately, last—part of his proposed monograph of the Aphidæ (a). This instalment contained a list, without references, of the genera and species known to Lichtenstein, but, as will be seen from the following pages, a large number of names was omitted and some were misapplied, so that a new list of genera should be useful, having regard to the interest and importance of the family. As the Aphid volume of Lethierry and Severin's "Catalogue général des Hémiptères" may be expected to appear within a few years, I have not added a list of all the species; those, however, described^{*} since Lichtenstein's Monograph, are now enumerated.

* This list was prepared originally for my own use in studying the Hawaiian Aphid fauna, all the forms of which are introduced, and, indeed, but few in number. The differences of opinion as to the validity of certain generic conceptions are so varied that it may well be that mistakes have been made here in this connection, as I can scarcely find two authors agreeing in their conception of what constitutes a genus in this family.

The works cited are almost all in my own library, and I am therefore responsible for the accuracy of the references, except in a few cases marked †.

The following abbreviations will materially shorten the paper.

Ann. Belg. = Annales de la Société Entomologique de Belgique.

Ann. France = Annales de la Société Entom. de France.

Bull. France = Bulletin de la Société Entom. de France.

Bull. Ital. = Bulletino Soc. Entom. Italiana.

Cowen Colorado = Cowen, in Bull. Colorado Agr. Exp. Sta., 31.

Hunter Bull. Iowa = Hunter, in Bull. Iowa Agr. Coll. Sta., 60.

Lichtenstein Mon. peup = †Lichtenstein, Monographie des pucerons du peuplier.

Oestlund Bull. = Oestlund, Bull. Geol. Survey, Minnesota IV.

Oestlund Report = Oestlund, 14th Ann. Rep., Geological Survey, Minnesota.

(a) "Les Pucerons. Monographie des Aphidiens," pp. 1-188, Pls. I-IV (coloured). Montpellier, 1885.

N. B.—1. The "Zoological Record" and "Bericht der Entom." incorrectly cite the source of Zehntner's papers, giving only the "separate" pagination and source. There are in Java numerous experiment stations, with entomological staff, etc.; the results of their researches, entomological, chemical, agricultural, are mostly published in the "Archief voor de Java-Suikerindustrie," a periodical now in its 13th year, but which apparently finds its way to very few American or European libraries. The entomological contributions, however, are distributed by their authors, separately paged and as "contributions" to their particular experiment station, the plates being unnumbered or with the numbers of the original impress. For instance, *Aphis adusta* was described (on p.?) of the 5th vol. of the "Archief" (1897) and reissued separately paged in the "Mededeelingen van het Proefstation Oost-Java, nieuwe serie No. 37." It is these latter references that are quoted in the "Record" and "Bericht."

I am a little uncertain of the exact dates of Koch's genera. The "Bericht" states, heft 1-4 (1854); 5-7 (1855); 8-9 (1856); the rest 1857. Heft 8 began p. 237, but I am not quite certain where heft 9 finished.

N. B.—2. "Kholodkovsky" is also written "Cholodkowsky."

Subfamily *Aphine* (b).

1. Macrosiphum, Passerini, 1860, Gli Afidi, 27, t. *rosæ* (L.), Pass.
= Siphonophora, Koch, 1855, Pflanzenläuse, 150.
= Nectarophora, Oestlund, 1887, Bull. Minn., 78
2. Drepanosiphum, Koch, 1855, Pflanzenläuse, 201, t. *platanoides*,
Koch, Licht.
= Drepheanosiphum, Hunter, 1901, Bull. Iowa, 91.
3. Phorodon, Passerini, 1860, Gli Afidi, 27, t. *humuli* (Schrank). Pass.
4. Nectarosiphon, Schouteden, 1901, Ann. Belg., XLV, 112.
= Macrosiphum, Oestlund, 1886, Rep. Minn., 27, t. *rubicola* (Oestl.)
5. Megoura, Buckton, 1876, Mon. Aph., I, 188, t. *viciae*, Buckt (c).
6. Rhopalosiphum, Koch, 1854, Pflanzenläuse, 23, t. *nymphææ* (L.)
Gerst.
= Siphocoryne, Passerini, 1860, Gli Afidi, 28, t. *nymphææ* (F.), Pass.
= Liosomaphis, Walker, 1868, Zoologist, 1119 (inedit?)
= Amphorophora, Buckton, 1876, Mon. Aph., I, 187, t. *ampullata*,
Buckton.
= Rhopalosiphon, Scudder, 1882, Nomencl. Zool., I, 294.

(b) The probable origin of the word "Aphis" does not allow of the forms *Aphidinæ*, etc.

(c) Kholodkovsky regards this as a syn. of No. 6.

7. Monellia, Oestlund, 1887, Bull. Minn., IV, 44, t. *caryella* (Fitch), Oestlund.
8. Calaphis, Walsh, 1862, Pr. Ent. S. Philad., I, 301, t. *betulella*, Walsh.
9. Mastopoda, Oestlund, 1886, Rep. Minn., 52, t. *pteridis*, Oestl.
10. Myzus, Passerini, 1860, Gli Afidi, 27, t. *cerasi* (F.), Pass.
= Mysus of some lists.
= Ceylonia, Buckton, 1891, Ind. Mus. Notes, II, 35, t. *theæcola*, Buckton.
11. Hyalopterus, Koch, 1854, Pflanzenläuse, 16, t. *pruni* (F.), Pass., 1860.
= Hyalopteris, Hunter, 1901, Bull. Iowa, 92.
12. Toxoptera, Koch, 1856, op. c., 253, t. *aurantiae*, Koch.
13. Aphis, Linné, 1758, Syst., Nat. Ed., X, 451, t. *sambuci* (L.), Lam., 1801.
= †Loxerates, Rafinesque, 1818, Amer. Monthly Mag., III, 16.
14. Hyadaphis, Kirkaldy, 1904, Entomologist, XXXVII, 279, t. *hyadaphis*, n. n. (= ||xylostei, Schrank).
= ||Siphocoryne, Passerini, 1863, and authors (not Passerini, 1860).
15. Pterocomma, Buckton, 1879, Mon. Aph. II., 142, t. *pilosa*, Buckton.
16. Aristaphis, n. n.
= ||Cladobius, Koch, 1856, Pflanzenläuse, 251, t. *populea* (Kalt.)*.
= ||Aphioides, Passerini, 1860, Gli Afidi 28.
17. Melanoxantherium, Schouteden, 1901, Ann. Belg., XLV, 113.
= ||Melanoxanthus, Buckton, 1879, Mon. Aph., II, 21, t. *salicis* (L.) Buckt. (d)
18. Brachycolus, Buckton, 1879, Mon. Aph., II, 146, t. *stellariæ* (Hardy), Buckton.
19. Cryptosiphum, Buckton, 1879, op. c., 144, t. *artemisiæ*, Buckton.
20. Pergandeida, Schouteden, 1903, Zool. Anz., XXVI, 686, t. *ononidis*, Schout.
21. Microsiphum, Kholodkovsky, 1902, Isviestiya S. Peterb. Liesn. Ir. it., 53, t. *ptarmicæ*, Khol. (e).

(d) According to the Zool. Record (which gives a reference to P. E. S., Wash., II, 517, instead of |P. Ac., Wash., II, 517), Pergande regards 15, 16 and 17 as one genus; Kholodkovsky regards *Pterocomma* as a synonym of *Chaitophorus*.

(e) This is not recorded in "Zool. Record." I have only a separately paged, undated copy before me, and I am indebted to the "Rysskoye Entom. obosriniye," III, 149 (1903), for the reference.

22. Chaitophorus, Koch, 1854, Pflanzenläuse, p. 1, t. *populi* (L.), Gerst.
 = |||Chætophorus of many lists.
 = ||†Phyllophorus, Thornton, 1852, Tr. Micr. Soc., Lond., p. ?, t. *testudinarius*.
 = †Phyllophora, Fernie, 1852, Morris Nat., II, 265, *testudinacea*.
 = ||†Chelymorpha, Lane Clark, 1858, The Microscope, p. ?, t. *phyllophora*, Clark [= *aceris* (L.)].
 = †Periphyllus, Van der Hœven, 1863, Tijdschr. Ent., VI, 7, t. *testudo*,
 Hœven [= *aceris* (L.)].
 = †Arctaphis, Walker, 1870, Zoologist, 2000 (? inedit).
 = Rhyllophorus (!) Scudder, 1882, Nomencl. Zool., I, 246.

Subfam. 2.—*Callipterinae*.

23. Bradyaphis, Mordvilko (f).
 24. Sipha, Passerini, 1860, Gli Afidi, 29, t. *glyceriae* (Kaltenbach), Pass.
 25. Callipterus, Koch, 1855, Pflanzenläuse, 208, t. *juglandis* (Kalt.), Pass.,
 1860.
 = Pterocallis, Passerini, 1860, Gli Afidi, 28, t. *alni*, Pass., = *maculata*,
 Heyden.
 = ||Ptychodes, Buckton, 1881, Mon. Aph., III, 39, t. *juglandis* (Kalt.),
 Buckt.
 = Panaphis, Kirkaldy, 1904, Entom. XXXVII, 279.
 26. Kallistaphis, n. n., t. *betulicolæ* (Kalt.).*
 = ||Callipterus, Buckton, 1881, Mon. Aph. III, 12 (not containing
 Koch's type).
 27. Myzocallis, Passerini, 1860, Gli Afidi, 28, t. *coryli* (Goetze), Pass.
 = Mysocallis Rondani, 1874, Bull. Ital. VI., 62 (g).
 28. Phyllaphis, Koch, 1856, Pflanzenläuse 248, t. *fagi* (L.), Koch.
 = Phillaphis of some lists.
 29. Symydobius, Mordvilko (h).

(f) I cannot trace this. Kholodovsky (1898) in a Forestry paper issued (separately? or perhaps in the Isviestiya S. Peterb. Liesn. Instit.?), under the title "Obyasnityelny Katalog Kollyektsy tlyei (Aphidæ)," described it in an analytical table, but without mention of species (p. 6). It is omitted in the later 1902 paper.

(g) Kholodkovsky considers 25, 26 and 27 to be only one valid genus.

(h) Included by Kholodkovsky & Schouteden in their paper, but without reference—I cannot trace it.

30. †*Pterochlorus*, Rondani, 1847, Nuov. Ann. Sci. Nat. Bologna (2) VIII, p. ? type || *roboris* Rond. = *longipes* Duf.
 Subj. 1. *Dryaphis*, Kirkaldy, 1904, Entom. XXXVII, 279, type *roboris* (L.).*
 = ||*Dryobius*, Koch, 1855, Pflanzenläuse, 225, t. *roboris* (L.)
 Subfamily 3.—*Lachninae*.
31. *Asiphum*, Koch, 1856, Pflanzenläuse, 246., t. *ligustrinellum* (Koch), Lichtenstein, 1885.
32. *Stomaphis*, Buckton, 1883, Mon. Aph. III, 61, t. *quercus*.
33. *Lachnus*, Butmeister, 1835, Handbuch Entom. II, 91, t. *pinicola* (Kalt.), Pass.
 = *Cinara*, Curtis, 1835, Brit. Entom., 576, t. *pini*, Curtis.
34. *Paracletus*, Heyden, 1837, Mus. Senckenberg II, 295, t. *cimiciformis* (Kalt.), Heyden.
35. *Trama*, Heyden, op. c., 293, t. *troglodytes*, Heyden.
 Subfamily 4.—*Eriosomatinae*.
36. *Eriosoma*, Samouelle, 1819, Entom. Useful Compendium 232, t. *mali* [= *lanigera*, Hausm.]
 = †*Myzoxyle*, Blot., 1824, Mem. Soc. Linn., Calvados, I, p. ?
 = †*Myzoxylus*, Blot., 1830, Mem. Soc. roy. agr., Caen. III, 332.
 = †*Myzoxile*, Avrilly, 1834, Du Myzoxile, p. 1 (t. of these three = *lanigera*).
 37. *Schizoneura*, Hartig, 1841, Zeitschr. Entom. III, 365, t. *ulmi* (L.), Pass., 1860.
 = †*Mimaphidus*, Rondani (ref.).
38. *Anoecia*, Koch, 1857, Pflanzenläuse, 275; t. *corni*.
 = *Anooecia*, Buckton, 1881. Mon. Aph., III, 108.
39. *Mindarus*, Koch, 1857, Pflanzenläuse, 277, t. *abietinus* (i).
40. *Schlechtendalia*, Lichtenstein, 1884, Stettin Ent. Zeit., XLIV, 242, t. *chinensis*.
41. *Pachypappa*, Koch, 1856, Pflanzenläuse, 269, t. *marsupialis*.
 = *Pachypapa* of some lists.
 = *Pacyhpapa* (!) Lichtenstein.
42. *Colopha*, Monell, 1877, Canad. Ent. IX, 102, t. *utricula*.
43. *Phloeomyzus*, Horváth, 1896, Wien. Ent. Zeit. XV, 5, t. *passerinii* (Lichtenstein), Horv.
 = †*Löwia*, Lichtenstein, 1886, Mon. peopl., 37, t. *passerinii* (Sign.), Licht.

(i) Kholodkovsky considers 36, 37, 38 and 39 to form one genus.

44. Tetraneura, Hartig, 1841, Zeitschr. Entom. III, 365, t. *rugicornis*, Hartig.
45. Geoica, Hart, 1894, 18th Rep. State Ent., Illinois, 101, t. *squamosa*, Hart (k).
46. Hormaphis, Osten Sacken, 1861, Stettin Ent. Zeit. XXII, p. 422, t. *hamamelidis*.
47. Byrsocrypta, Haliday, 1839, Ann. Nat. Hist. II, 190, t. *bursaria* (Linn.), Hal.
 = Brysocrypta, Westwood, 1839, Intr. Mod. Class. Ins. Synopsis, 118.
 = Pemphigus, Hartig, 1841, Zeitschr. Ent. III, 365, t. *bursaria* (Linn.), Pass., 1860.
 = Pemphilus (!) Kaltenbach, 1843, Monographie, 180.
 = †Aphioides, Rondani, 1847, Nuovi Ann. Sci. Nat. Bologna (2), VIII, 439, t. *bursaria* (L.), Rond.
 = †Baizongia, Rondani (? ref.).
 = Thecabius, Koch, 1857, Pflanzenläuse, 294, t. *populneus*.
 = Melaphis, Walsh, 1866, Proc. E. S., Philad., VI, 281, t. *rhois* (Fitch).*
48. Stagona, Koch, 1857, op. c., 284, t. *xylostei*, Koch.
49. Holzneria, Lichtenstein, 1875, Bull. France (5) V., p. LXXVI, t. *poschingeri* (Holzner), Licht.
50. Prociphilus, Koch, 1857, Pflanzenläuse, 279, t. *bumeliae* (Schr.).
51. Rhizobius, Burmeister, 1835, Handb. Entom. II, 87, t. *pilosellæ*, Burm.*
 = Rhizophthiridium, Vanderhoeven, 1849, Handb. Dierkunde I, 508 [n. n. for Rhizobius].
 = Rhizoicus, Passerini, 1860, Gli Afidi, 30, t. *sonchi*, Pass. (l.).
52. †Rhizoconus, Mokrzhetsky, 1897, Trudy Russk. Entom. XXX, 438, t. *ampelinus* [genus not separately described; the first separate description was probably by Kholodkovsky, 1898, Forestry work already cited; there he attributes the genus to Horváth].
53. Aploneura, Passerini, † 1863, Arch. Zool. II, p. ?, t. *lentisci*.
 = Haploneura of some lists.
54. Vacuna, Heyden, 1837, Mus. Senckenberg II, 289, t. *coccinea*.
 = Thelaxes, Westwood, 1839, Intr. Mod. Class. Ins., Synopsis 118, t. *quercicola*, Westw.

(k) Hervath considers 44 and 45 one genus.

(l) Kholodkovsky considers 48, 49, 50 and 51 as synonyms of 47.

55. *Glyphina*, Koch, 1856, *Pflanzenäuse*, 259, t. *betulae* (Kalt.), Koch. (m).
56. *Cerataphis*, Lichtenstein, 1882, *Bull. France* (6), II, p. XVI, t. *lataniæ* (Boisd.), Licht.
 = ||*Boisduvalia*, Signoret, 1868, *Ann. France* (4), VIII, 400, t. *lataniæ* (Boisd.), Sign., [nom. nudum].
 = *Ceratovacuna*, Zehntner, 1897, *Archief Java Suikerindustrie*, V, No. 10, p. ?, t. *lanigera*, Zehntner (n).
 = *Ceratophis* (?) Hempel, 1902, *Ann. Mag. Nat. Hist.* (7), IX, 400.

(To be continued).

NITIDULA BIPUSTULATA IN A NEW ROLE.

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One day last summer I received a letter from a physician in a town near Carbondale, stating that one of his patients had voided some live beetles, and asking me if I cared to see them. Assuring him that I did, he sent me several specimens of the species above mentioned. Not having this species in our collection, one of them was sent to Dr. F. M. Webster, Dept. of Agriculture, Washington, who identified it for me, but doubted its being an intestinal parasite.

Briefly stated, the history of the case is as follows: The man came to the doctor several days before his writing to me, stating that he had found the insects in his excreta. The doctor told him they must have come from the ground on which he had voided the excreta; and he further advised him to use a clean chamber next time. The next day the man came back to the doctor with a lot of the beetles, stating that he had done as directed, and that he passed as many as a tablespoonful of the beetles.

On talking with the doctor a few days ago, I find that the man has been voiding these beetles for some time, and that six years ago his son passed quantities of the same beetles. The son has since died of typhoid fever. The boy told his father about his passing them, and this led the latter to notice his own excreta. The beetles were voided alive, but soon died after crawling a little way from the excreta.

This is the first instance I have known, either from personal observation or from the literature, of adult insects being voided from the enteric canal of either a man or a related mammal.

(m) Kholodkovsky places this with 54.

(n) Spelt *Ceratovacunna* both in *Zool. Record* and *Bericht der Entom.*, both of which give incorrect reference.